

anti-p21

Cat #: HM1262
Rabbit polyclonal IgG
0.2 µg/µl, store at 4 °C

For research use only

BACKGROUND

Cyclins play an essential role in promoting cell cycle transitions via their ability to associate with and activate their cognate cyclin-dependent kinases (Cdks). p21 (also designated WAF1/Cip1) was identified in cyclin A, cyclin D1, cyclin E and Cdk2 immunoprecipitates. It is a potent, tight-binding inhibitor of Cdks and thus functions as a regulator of cell cycle progression. The expression of p21 is tightly controlled by the tumor suppressor protein p53, through which it mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli. p21 can interact with proliferating cell nuclear antigen (PCNA), a DNA polymerase accessory factor, and plays a regulatory role in S phase DNA replication and DNA damage repair.

SPECIFICITY

This antibody recognizes p21 of human, rat and mouse origin.

The antibody can be used in Western blotting, immunoprecipitation and immunostaining.

IMMUNOGEN

Full-length recombinant human p21 protein.

STORAGE

This antibody is stable for 12 months when stored at 2-8°C.

REFERENCES

1. Harper, J.W., Adami, G.R., Wei, N., Keyomars, K., and Elledge, S.J. 1993. The p21 cdk-interacting protein Cip1 is a potent inhibitor of G1 cyclin-dependent kinases. *Cell* 75: 805-816.
2. El-Deiry, W.S., Tokino, T., Velculescu, V.E., Levy, D.B., Parsons, R., Trent, J.M., Lin, D., Mercer, W.E., Kinzler, K.W., and Vogelstein, B. 1993. *WAF1*, a potential mediator of p53 tumor suppression. *Cell* 75: 817-825.
3. Xiong, Y., Hannon, G.J., Zhang, H., Casso, D., Kobayashi, R., and Beach, D. 1993. p21 is a universal inhibitor of cyclin kinases. *Nature* 366: 701-704.
4. El-Deiry, W.S., Harper, J.W., O'Connor, P.M., Velculescu, V.E., Canman, C.E., Jackman, J., Pietenpol, J.A., Burrell, M., Hill, D.E., Wang, Y., Wiman, K.G., Mercer, W.E., Kastan, M.B., Kohn, K.W., Elledge, S.J., Kinzler, K.W., and Vogelstein, B. 1994. WAF1/CIP1 is induced in p53-mediated G1 arrest and apoptosis. *Cancer Res.* 54: 1169-1174.
5. Gu, Y., Turck, C.W., and Morgan, D.O. 1993. Inhibition of CDK2 activity *in vivo* by an associated 20K regulatory subunit. *Nature* 366: 707-710.

6. Alt, J.R., Gladden, A.B. and Diehl, J.A. 2002. p21(Cip1) Promotes cyclin D1 nuclear accumulation via direct inhibition of nuclear export. *J. Biol. Chem.* 277, 8517-8523.
7. Seoane, J., Le, H.V. and Massague, J. 2002. Myc suppression of the p21(Cip1) Cdk inhibitor influences the outcome of the p53 response to DNA damage. *Nature* 419, 729-734.
8. Bendjennat, M., Boulaire, J., Jascur, T., Brickner, H., Barbier, V., Sarasin, A., Fotedar, A. and Fotedar, R. 2003. UV irradiation triggers ubiquitin-dependent degradation of p21(WAF1) to promote DNA repair. *Cell* 114, 599-610.

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